

REMARKS

Reconsideration is respectfully requested, for the rejection under 35 USC §112, first paragraph, as being based on a disclosure which is not enabling. As the specification discloses, the bacterial culture is novel. But this refers to the culture obtained by the process of claims 3 and 13.

The bacterium used to produce this culture is not novel. It is disclosed, for example, in U.S. Patent 5,919,674 to TUNLEY, recited at the top of page 2 of our specification. If needed, we can also produce a number of other literature references of sufficiently early date, to support this.

The claims have been amended so as to take care of the formal matters raised by the Examiner under 35 USC §112, second paragraph. The only exception is as to the objection made on page 4, lines 9 and 10 of the Official Action (not counting the heading), in which it is objected that the composition of the minerals does not include copper. However, reference to line 1 of claim 1 shows that the ore contains copper sulphide.

Reconsideration is also respectfully requested, for the rejection of the claims under 35 USC §103, as unpatentable over TUNLEY in view of HUTCHINS et al. 4,729,788, or further in view of HEINEN et al. 3,890,007, or as unpatentable over WO 98/39491 in view of HUTCHINS et al.

The rejection falls down on HUTCHINS et al. As the Examiner points out, HUTCHINS et al. discloses aeration using air

or oxygen (emphasis supplied) (column 4, lines 48-52 and elsewhere).

However, neither air nor oxygen will suffice in the present invention. Instead, according to the present invention, what is to be used is air enriched with pure oxygen.

On the one hand, oxygen would have the immediate effect of killing the bacteria.

On the other hand, aeration resulting from continuous mechanical rotation merely with air is insufficient by itself. Instead, the oxygen content of the air must be raised, but not to the level of pure oxygen.

Thus, the references simply do not combine to teach the present invention. TUNLEY, for example, does not teach the continuous supply or a mechanical agitation of the bacterial medium nor even the injection of air into the medium.

HUTCHINS et al., on the other hand, is in another field and so would not be looked to by a person of ordinary skill in this art, for any teaching useful in HUTCHINS et al. In addition, as pointed out above, even the combination of references would not teach the use of air enriched in oxygen.

What is true for TUNLEY is also true for WO 98/39491. Finally, HEINEN et al. does not improve the basic references as to the deficiencies pointed out above, and so need not be discussed in greater detail.

WO 96/41025 and the article by BALLESTER et al. are submitted herewith in duplicate copies, in accordance with the Examiner's request.

In view of the present amendment and the foregoing remarks, therefore, it is believed that this application has been placed in condition for allowance, and reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Robert J. Patch', written over a horizontal line.

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Appendix:

The Appendix includes the following items:

- copies of WO 96/41025 and BALLESTER et al., "Leaching capacity of a new extremely thermophilic microorganism, *Sulfolobus rivotincti*"